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24 March, 2015

Hon Daniel Andrews MP
Premier of Victoria
Parliament House
Melbourne, VIC, 3000
Sent via email:
daniel.andrews@parliament.vic.gov.au

OPEN LETTER

Dear Premier,

Re: **Changes to Wind Development Planning and Regulation**

I refer you to previous correspondence ¹ in which the Waubra Foundation ensured you and fellow relevant Ministers were legally on notice about the serious adverse health effects from wind turbine noise pollution, which is directly causing noise nuisance to Victorian rural families, driving them out of their homes.

I note again that you were made personally aware of the noise nuisance occurring at the Waubra Wind Development from affidavits from a number of Waubra residents, **in mid 2010, before** I joined the Waubra Foundation. These legal statements were given to you by former Waubra farmer and resident, Mr Noel Dean, at a Community Cabinet Meeting in Bendigo, when you were the former Health Minister. ²

The Waubra Foundation has copies of internal documents from **2009** obtained under FOI from the Victorian Health Department, which indicate health department staff were aware of reports of adverse health effects in wind turbine neighbours, and of course there are also the letters which Dr David Iser sent to the former Victorian Premier Steve Bracks, and then Ministers Brumby, Delahunty, and Thwaites, reporting his concerns about the adverse health effects he had seen in his patients, and identified in his world first population survey, **in May, 2004.**³ There are also the admissions made by Medical Practitioners Dr Simon Slota Kan and Dr Stephanie Williams, employed by the Victorian Department of Health in April and October 2011, (with plenty of witnesses) that they accepted the problems the residents were reporting were real.

I previously mentioned Steven Cooper's acoustic investigation at Cape Bridgewater, commissioned by Pacific Hydro. Mr Cooper's report was released publicly by Pacific Hydro in January, 2015 and has received international acclaim from his acoustic colleagues in the USA, Europe, and Australia who have pioneered the acoustic research in this area, including the US Director of Acoustic Standards, Dr Paul Schomer, and an acoustic consultant who does a lot of work for the wind industry, Mr George Hessler.⁴

Noise nuisance is a very serious problem, and it is most unwise of your government Ministers to ignore it.

¹ <http://waubrafoundation.org.au/resources/letter-notice-victorian-premier-daniel-andrews-december-5-2014/>

² personal communication, Mr Noel Dean

³ <http://waubrafoundation.org.au/resources/dr-david-iser-2004-conducts-first-survey-patients-living-near-wind-project/>

⁴ <http://waubrafoundation.org.au/resources/cooper-s-acoustic-group-results-cape-bridgewater-acoustic-investigation/>

Mr Cooper's work at Waterloo wind development in South Australia identified the threshold of perception of infrasound in chronically sensitized residents as 50 dB (rms) at 4 – 5 Hz, using narrow band analysis, in May 2013. This threshold level was recently confirmed in the participating residents in the Cape Bridgewater acoustic investigation. **Levels above this perception threshold caused *serious noise nuisance symptoms, including sleep disturbance, which at times were so severe, they needed to leave their homes.***

Cooper's thresholds of perception are consistent with thresholds established by US Department of Energy funded research from thirty years ago, conducted by Dr Neil Kelley and his team, who included two branches of NASA and multiple aeroacoustics University faculties, wind turbine manufacturers, and others.⁵ Dr Kelley's team's work **established a *direct causal relationship between wind turbine generated impulsive infrasound and low frequency noise (ILFN) and the physiological and psychological symptoms and sensations being reported by residents, including sleep disturbance, and body vibrations***; identical to symptoms and sensations described by Victorian residents at locations including Toora, Waubra, Cape Bridgewater, Glenthompson, Leonards Hill, and Macarthur, out to distances of ten km in some locations.

The wind industry and its acousticians were, and are, well aware of this Kelley research and what it means. The wind industry "helped" write the noise pollution guidelines and standards, and ensured that the measurement of ILFN inside homes was not included in those guidelines and regulations. A timeline has recently been constructed to illustrate who knew what, when, and I suggest you and all your responsible ministers and their advisers have a very close look at it so you understand the monumental deception of the public, and of governments, by this industry and its professional "helpers".⁶

The NHMRC CEO has recently ***explicitly confirmed that there is evidence of adverse health effects out to 500 metres***, whilst being questioned by Senator John Madigan in Senate Estimates on 25 February, 2015. Professor Warwick Anderson stated:

"The overwhelming bulk of the evidence shows that, up to 500 metres, there are indeed effects on health of noise at the level that wind turbines do. From 500 to 1,500, the evidence is that there probably are, although they are probably modest. And the bulk of evidence shows that, after 1,500 metres, although some people may indeed individually attribute their sleep to the wind turbine noise, the likelihood is low"

However, Professor Anderson and the NHMRC's own reports have made it very clear that there is very little research evidence examining the reported impacts on sleep out beyond 1500 metres. However the NHMRC Literature Review included Australian research which demonstrated that sleep disturbance was indeed reported out to distances of ten km.⁷

It is unfortunate that the NHMRC expert panel made decisions which ensured the exclusion of some of the most important research evidence which added further weight to concerns about ILFN being emitted at excessive levels, and directly causing sleep disturbance out to those much greater distances, such as Professor Colin Hansen's ARC funded research at Waterloo in South Australia.⁸

So, relying solely on the latest NHMRC reports would be unwise, because they failed to include or properly consider some of the most crucially important evidence, including of course the Kelley/NASA research in the 1980's,⁹ the recent Cooper Acoustic Investigation (which had only just been released), and the Hansen research at Waterloo. This is not surprising, given that the sole acoustic expert on the NHMRC expert panel had **undisclosed financial conflicts of interest with the wind industry**, now common knowledge after being

⁵ <http://waubrafoundation.org.au/2013/explicit-warning-notice/>

⁶ <http://cdn.knightlab.com/libs/timeline/latest/embed/index.html?source=0Ak2bgr7C0nhPdGR3S1IEekU3T3p4ZDhUNDDRV2Y2ZkE&font=Bevan-PotanoSans&maptype=toner&lang=en&height=650>

⁷ <http://waubrafoundation.org.au/resources/waterloo-wind-farm-survey-2012/>

⁸ <http://waubrafoundation.org.au/resources/hansen-zajamsek-hansen-noise-monitoring-waterloo-wind-farm/>

⁹ <http://waubrafoundation.org.au/resources/waubra-foundation-open-letter-nhmrc-re-systematic-literature-review/>

exposed in Federal Parliament by Senator John Madigan¹⁰ and Senator Chris Back.¹¹ The deceit of the Australian public by the wind industry, and its helpers **both outside and inside government**, continues, and predictably ignores and excludes scientific evidence against its commercial interests.

Mr Cooper has advised that in order to prevent excessive infrasound occurring inside homes at levels associated with severe symptoms, **a setback distance of 7km is required for 2 MW turbines**. He has further advised that the infrasound levels in one of the Cape Bridgewater homes were 20 dB **higher** than the levels at the Shirley Wind Development in Wisconsin, USA, where the local Town Health Board have conducted their own investigation and declared the facility a “Hazard to Human Health”.¹²

What the Victorian government should be doing, right now, to protect the health and in particular the sleep of its residents, is

- **Setting the maximum allowable infrasound level at 50 dB (rms) 4 – 5 Hz (narrow band analysis, not 1/3 octave band) inside homes and actively enforcing those levels**, in order to protect people from noise annoyance caused by excessive infrasound, which Steven Cooper’s research clearly and consistently demonstrated in people already sensitized to ILFN. Even these levels may be insufficient to protect people chronically exposed – more research is required.
- **Recalculating the required setbacks for industrial wind turbines**, based on this knowledge of the required maximum wind turbine generated infrasound levels inside homes, in order to ensure the safety of residents over the lifetime of the projects, which could be the lifetime of babies born now (ie 75 years). The damage from ILFN is cumulative, and farmers may be conceived, and live on their farms for their whole lives. Steven Cooper’s calculations for 2 MW turbines give a setback distance of 7km based on the known attenuation of infrasound over distance.
- **Commissioning targeted acoustic research to determine infrasound perception threshold levels with other sources of industrial noise** in quiet background noise environments, especially those in rural areas, which operate at night time and are disrupting sleep (eg mining, CSG, other power generators).

Allowing industrial wind turbines or other industrial noise sources to be sited, and operated, in ways which are known to cause noise nuisance to neighbours, is deliberately allowing serious harm to human health to occur, about which you and your ministers have already been specifically warned. Mr Cooper’s acoustic evidence cannot be ignored or dismissed, inconvenient though it is for Pacific Hydro, the IFM Board and owners (Industry Superannuation Funds), the wind industry, and your government. Failing to act to prevent serious harm to human health, for the profit of third parties, is indefensible. Making decisions such as the reduction of turbine setbacks from 2km to 1km, which will inevitably cause serious harm to human health when the Victorian Government has been repeatedly, specifically warned about the problems, is even worse.

I note that the Victorian Union movement swung into action to ensure the noise nuisance being caused by infrasound and low frequency noise emissions during the day from the Laverton Open Cycle Gas Turbines to the Victorian workers at Metroll, was properly dealt with to protect the health of the workers. The symptoms being complained of by these Metroll workers are identical to those known as “noise nuisance” to lawyers and environmental health officers, as “noise annoyance” to acousticians, and as “wind turbine syndrome” to an increasing number of treating health practitioners when the noise source is wind turbines. After the Metroll case, it is clear that these same symptoms and sensations have been judicially accepted in Victoria as coming from a noise source, which also emits excessive levels of infrasound and low frequency noise.¹³

¹⁰ <http://waubrafoundation.org.au/resources/nhmrc-ceo-prof-anderson-questioned-about-draft-review-by-senate/>

¹¹ <http://waubrafoundation.org.au/resources/senator-chris-back-questions-evidence-from-vested-interests-at-planning-review-hearings/>

¹² <http://waubrafoundation.org.au/2014/duke-energys-shirley-wisconsin-wind-development-hazard-human-health-declares-brown-county-board-health/>

¹³ <http://waubrafoundation.org.au/resources/vcat-decision-metroll-victoria-v-snowy-hydro/>

Sleep deprivation is used as a method of torture, as my previous letter to you in December 2014 pointed out. If it is not acceptable to torture prisoners with sleep deprivation, then why is it acceptable to you and your fellow Ministers with portfolio responsibilities in Health (Minister Hennessey), Energy (Minister D'Ambrosio) and Planning (Minister Wynne) to **knowingly** allow this to happen to even more Victorian rural residents, who include particularly vulnerable groups in the population such as babies, young children, and the elderly?

The government's decision to reduce setback distances between wind turbines and homes to 1km is indefensible, and indeed given the gravity of the harm already being caused and the potentially life threatening conditions being reported by some residents, their treating health professionals, acousticians, and the Waubra Foundation to Victorian Premiers, Ministers, and Planning and Health authorities over the last ten years; **criminal negligence** and **willful blindness** are phrases which are entirely appropriate to describe the Victorian government's recent behaviour to reduce wind turbine setback distances.

The Foundation urges the Victorian Government to reconsider this recent decision to reduce turbine setback distances, in the light of the information provided above, and act decisively to protect the health of **all** Victorians, which you and your Health Minister have stated is very important to your government.

Yours sincerely



Sarah Laurie,
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Former Rural General Practitioner and Former Fellow Royal Australian College of General Practitioners
Former Fellow Australian College of Remote and Rural Medicine

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Minister Hennessey (Health),
Minister Wynne (Planning),
Minister Jennings (Special Minister for State – government transparency, integrity, accountability),
Minister Pulford (Regional Development)
Minister D'Ambrosio (Energy)
Minister Foley (Mental Health, Housing, Disability, Aging)
Minister Hutchins (Local Government),
Minister Mikakos (Minister for Families and Children),
Minister Neville (Environment, Environmental Protection Agency), and
Minister Pakula (Attorney General)